

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/010992

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 C01B17/90 C01G49/14

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C01B C01G C23G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, PAJ, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 382 916 A (BEECHER BRAZIER K) 10 May 1983 (1983-05-10) cited in the application claim 1 column 1, line 50 - column 2, line 30 examples	1-21
A	US 4 952 378 A (WATANABE MORIO ET AL) 28 August 1990 (1990-08-28) claim 1 column 1, line 54 - column 2, line 10 examples	1-21
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
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- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
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Date of the actual completion of the international search

16 December 2004

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13/01/2005

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 417 955 A (CONNOLLY DAVID W) 23 May 1995 (1995-05-23) claims 1,18 column 3, lines 13-40 column 4, lines 26-33 examples	1-21
A	GB 750 496 A (STEEL COMPANY OF WALES LTD) 20 June 1956 (1956-06-20) the whole document	1-21
A	FR 1 302 041 A (CESKOSLOVENSKA AKADEMIE VED) 24 August 1962 (1962-08-24) the whole document	1-21

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 4382916	A	10-05-1983	CA	1165533 A1		17-04-1984
US 4952378	A	28-08-1990	AU	606695 B2		14-02-1991
			BR	8803225 A		06-02-1990
			CA	1303815 C		23-06-1992
			DE	3881599 D1		15-07-1993
			DE	3881599 T2		20-01-1994
			EP	0301700 A1		01-02-1989
			ES	2040857 T3		01-11-1993
			FI	883107 A ,B,		31-12-1988
			JP	1157421 A		20-06-1989
			JP	2702158 B2		21-01-1998
			NO	882765 A		02-01-1989
US 5417955	A	23-05-1995	CA	2143589 A1		02-09-1995
GB 750496	A	20-06-1956	NONE			
FR 1302041	A	24-08-1962	NL	267927 A		